

corollae tubo quam calyce et corollae lobis vix longiore distinguitur.

The type was collected at the Grand Canyon, Coconino County, Arizona (*Whiting 1072/5200*, U. S. Nat. Herb. 1814983). Other collections, all in Coconino County, at elevations of 6,800 to 7,200 feet are: Grand Canyon (*Eggleston 15669, 15682*), south rim of the Grand Canyon (*Collom 1073*), Grand Canyon Road (*Whiting 1047/4311*), near the Grand Canyon (*Lemmon* in 1884),² Williams (*Rusby* in 1883), base of the San Francisco Peaks (*Wooton 489*), Walnut Canyon National Monument (*Beaubien 1054/5320*). There is also, in the United States National Herbarium, an imperfect specimen, labeled in G. R. Vasey's handwriting, "Nevada, Lt. Wheeler, 1872," that apparently belongs here. This specimen may have been the basis for the inclusion of Nevada in the range of *G. multiflora*, in Tidestrom's Flora of Utah and Nevada (Contrib. U. S. Nat. Herb. 25: 435. 1925). If it is correctly labeled as to locality, var. *Whitingi* has a wider range than the other forms of *G. polyantha*.

There is a much stronger tendency than in *G. multiflora*, and in the other forms of *G. polyantha*, to have the corolla lobes widest near the apex, but this is not invariably the case. The stamens, as is usually also the case in *G. multiflora*, are inserted very nearly at the same level. Counts made on six individual plants, including the type, showed that the number of ovules per ovary varies from 6 to 18.

Bureau of Plant Industry,
United States Department of Agriculture,
Washington, D. C.
United States Field Station
Sacaton, Arizona.
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REVIEW

Wild Violets of North America. By VIOLA BRAINERD BAIRD. Pp. xv + 225, with 17 illustrations in the text and 80 plates in full color. University of California Press, Berkeley. 1942. \$10.00.

This attractive volume, written in non-technical language, will please both professional botanists and amateurs. The preparation of a complete account of North American violets is a task for which the author is especially well equipped. Familiar with the group since childhood, Mrs. Baird assisted her father, Ezra Brainerd, in his well-known studies on the genus and during later years she has continuously added to her knowledge by field and garden studies of almost every species.

The brief preamble contains an informative résumé of the distribution and probable sources of the North American species of *Viola*, a discussion of the variation in such characters as leaf

² Cited by Brand (Pflanzenr.) under *G. multiflora* var. *polyantha*. The collection at Cosnino, Ariz. (*Jones 4043*) also cited by Brand under var. *polyantha*, is *G. multiflora*.

shape and flower color, and a simple explanation of the flower structure and function. There follows a key to the species groups which is both technically accurate and easily understood and utilized by the layman. Especially valuable as a scientific contribution are the two pages of line drawings illustrating the variation in the shape of the pistil, the remarkable and almost ludicrous development of which will interest and perhaps even amuse every reader. Since all were drawn from fresh material, persistent misconceptions as to pistil shape in certain species are here for the first time corrected.

The classification divides the group into three sections, each of which is introduced by a brief discussion of the characters common to its members. The account of each species is very readable and contains information as to the outstanding characters, distribution, habitat and flowering period of each, supplemented by notes on any features of unusual interest such as the derivation of the name, by whom and where the species was first collected, and mention of the characters by which it may be distinguished from its nearest relatives. As is fitting in a treatment which is both popular and technical, Mrs. Baird has not hesitated to group under their respective linneons minor entities which have been named as species. Thus the specific units as she conceives them are readily recognizable even by those without previous experience with taxonomic concepts.

The plates, reproduced from water colors by the late F. Schuyler Matthews, are all natural size and indicate with an unusual degree of accuracy the different shades in the flower color throughout the North American representatives of the genus. The color of practically every species was matched with great care with living material from native colonies or garden transplants and has been faithfully reproduced.

Following the general text, in a "Key to Colors in Wild Violets," the species are grouped according to their principal color tones and these groups are still further subdivided as to the precise shade of flower color. Next, a list of the species is included with citations to the original descriptions and data as to the sources of the material used as a basis for the color plates. The volume closes with indices to the scientific and popular names.

The book is handsomely bound in violet blue cloth with gold lettering and expertly printed in twelve point Baskerville on a highly lustrous coated paper. The edition is limited to one thousand signed copies.—ETHEL CRUM.